

IN THE CLAIMS:

Please cancel Claims 87 to 137 without prejudice or disclaimer of subject matter, and amend Claims 138, 142, 146, 150 and 152 as shown below. The claims, as pending in the subject application, now read as follows:

1. (Previously presented) A peripheral processing apparatus connected to an information processing apparatus through a network, comprising:

storage means storing a control program which the information processing apparatus uses to control said peripheral processing apparatus;

reception means for receiving a transfer request from the information processing apparatus requesting that the control program stored in said storage means be transferred to the information processing apparatus through the network;

securing means for securing a channel to the information processing apparatus through the network on the basis of the transfer request received by said reception means; and

transfer means for transferring the control program stored in said storage means through the channel secured by said securing means on the network to the information processing apparatus in response to the transfer request received by said reception means, so as to allow the information processing apparatus to use the control program to generate control data for controlling said peripheral processing apparatus, which control data is subsequently to be transferred to said peripheral processing apparatus through the network.

2. (Previously presented) An apparatus according to claim 1, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by the information processing apparatus.

3. (Previously presented) An apparatus according to claim 1, wherein said transfer means executes transfer at a timing based upon reset operation of the peripheral processing apparatus.

4. (Previously presented) An apparatus according to claim 1, wherein said transfer means executes transfer at a timing based upon detection of a state in which the peripheral processing apparatus is unable to execute its processing.

5. (Previously presented) A peripheral processing apparatus according to claim 1, wherein said reception means receives the control data from the information processing apparatus generated by the information processing apparatus using the transferred control program, and said peripheral processing apparatus further comprising control means for executing a control processing according to the control data received by said reception means.

6. (Previously presented) A peripheral processing apparatus connected to an information processing apparatus through a network, comprising:

storage means storing a control program;

reception means for receiving a transfer request from the information processing apparatus requesting that the control program stored in said storage means be transferred to the information processing apparatus through the network;

transfer means for transferring the control program stored in said storage means through the network to the information processing apparatus in response to the transfer request received by said reception means, so as to allow the information processing apparatus to use the control program to generate control data for controlling said peripheral processing apparatus, which control data is subsequently to be transferred to said peripheral processing apparatus through the network;

unique information storage means for storing information unique to said peripheral processing apparatus; and

control means for controlling said transfer means to transfer the unique information stored in said unique information storage means through the network to the information processing apparatus in response to said reception means receiving a transfer request from the information processing apparatus requesting that the unique information be transferred to the information processing apparatus.

7. (Previously presented) An apparatus according to claim 6, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by the information processing apparatus.

8. (Previously presented) An apparatus according to claim 6, wherein the peripheral processing apparatus is a printer for forming images.

9. (Previously presented) An apparatus according to claim 6, wherein the peripheral processing apparatus is a copy machine.

10. (Previously presented) An apparatus according to claim 6, wherein said transfer means executes transfer at a timing based upon reset operation of the peripheral processing apparatus.

11. (Previously presented) An apparatus according to claim 6, wherein said transfer means executes transfer at a timing based upon detection of a state in which the peripheral processing apparatus is unable to execute its processing.

12. (Previously presented) An apparatus according to claim 6, wherein the unique information describes each location of the peripheral processing apparatus.

13. (Previously presented) An apparatus according to claim 6, wherein the unique information describes execution speed of the peripheral processing apparatus.

14. (Previously presented) An apparatus according to claim 6, wherein the unique information describes running cost of each of the peripheral processing apparatuses.

15. (Previously presented) An apparatus according to claim 6, wherein the unique information describes power consumption of each of the peripheral processing apparatuses.

16. (Previously presented) An apparatus according to claim 6, wherein the unique information describes a trouble rate of each of the peripheral processing apparatuses.

17. (Previously presented) An information processing apparatus connected to a peripheral processing apparatus through a network, comprising:

request means for requesting the peripheral processing apparatus to transfer a control program for controlling the peripheral processing apparatus to said information processing apparatus through the network;

reception means for receiving the control program transferred from the peripheral processing apparatus through the network in response to a request provided by said request means;

building means for placing the control program received by said reception means under the control of an operating system and building the received control program in the operating system; and

generation and transfer means for generating control data for controlling the peripheral processing apparatus using the control program built in the operating system by said building means and transferring the control data through the network to the peripheral processing apparatus.

18. (Previously presented) An apparatus according to claim 17, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by said information processing apparatus.

19. (Previously presented) An apparatus according to claim 17, wherein said reception means receives the control program from the peripheral processing apparatus through the network at timing based upon reset operation of the peripheral processing apparatus.

20. (Previously presented) An apparatus according to claim 17, wherein said reception means receives the control program from the peripheral processing apparatus through the network at timing based upon reset operation of the information processing apparatus.

21. (Previously presented) An apparatus according to claim 17, wherein said reception means receives the control program from the peripheral processing apparatus through the network at a timing based upon detection of a state in which the peripheral processing apparatus is unable to execute its processing.

22. (Previously presented) An information processing apparatus connected to a peripheral processing apparatus through a network, comprising:

request means for requesting the peripheral processing apparatus to transfer a control program for controlling the peripheral processing apparatus to said information processing apparatus through the network;

reception means for receiving the control program transferred from the peripheral processing apparatus through the network in response to a request provided by said request means;

storage means for storing the control program received by said reception means; and

generation and transfer means for generating control data for controlling the peripheral processing apparatus using the control program stored in said storage means and transferring the control data through the network to the peripheral processing apparatus;

wherein said apparatus is connected to a plurality of the peripheral processing apparatuses through the network,

wherein said request means requests each of the plurality of peripheral processing apparatuses to transfer information unique to the peripheral processing apparatus to said information processing apparatus through the network, and

wherein said reception means receives the unique information transferred from each of the plurality of peripheral processing apparatuses through the network in response to a request provided by said request means,

and said information processing apparatus further comprising:

second storage means for storing the unique information received by said reception means; and

selection means for selecting one of the plurality of peripheral apparatuses based on the unique information stored in said second storage means,

wherein said generation and transfer means generates control data for controlling the one peripheral processing apparatus selected by said selection means based on the control program stored in said storage means and transfers the control data through the network to the selected one peripheral processing apparatus.

23. (Previously presented) An apparatus according to claim 22, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by said information processing apparatus.

24. (Previously presented) An apparatus according to claim 22, wherein one said peripheral processing apparatus is a printer for forming images.

25. (Previously presented) An apparatus according to claim 22, wherein one said peripheral processing apparatus is a copy machine.

26. (Previously presented) An apparatus according to claim 22, wherein each said peripheral processing apparatus is a copy machine.

27. (Previously presented) An apparatus according to claim 22, wherein said reception means receives both the control program and the unique information from the peripheral processing apparatuses through the network at timing based upon reset operation of the peripheral processing apparatuses.

28. (Previously presented) An apparatus according to claim 22, wherein said reception means receives the unique information from the peripheral processing apparatuses through the network at a timing based upon detection of a state in which any of the peripheral processing apparatuses is unable to execute its processing.



29. (Previously presented) An apparatus according to claim 22, wherein, when said reception means receives the unique information from the peripheral processing apparatuses through the network at a timing based upon detection of a state in which any of the peripheral processing apparatuses is unable to execute its processing, said selection means eliminates whichever of the peripheral processing apparatuses is in the inexecutable state, from possible apparatuses available to be selected.

30. (Previously presented) An apparatus according to claim 22, wherein the unique information describes execution speed of each of the peripheral processing apparatuses.

31. (Previously presented) An apparatus according to claim 22, wherein the unique information describes each location of the peripheral processing apparatuses.

32. (Previously presented) An apparatus according to claim 22, wherein the unique information describes running cost of each of the peripheral processing apparatuses.

33. (Previously presented) An apparatus according to claim 22, wherein the unique information describes power consumption of each of the peripheral processing apparatuses.

34. (Previously presented) An apparatus according to claim 22, wherein the unique information describes a trouble rate of each of the peripheral processing apparatuses.

35. (Previously presented) A method of controlling a peripheral processing apparatus connected to an information processing apparatus through a network, comprising the steps of:

storing a control program in a memory, which the information processing apparatus uses to control said peripheral processing apparatus;

receiving a transfer request from the information processing apparatus requesting that the control program stored in said storage means be transferred to the information processing apparatus through the network;

securing a channel to the information processing apparatus through the network on the basis of the transfer request received by said reception means; and

transferring the control program stored in the memory through the channel secured by said securing step on the network to the information processing apparatus in response to a transfer request received in said receiving step, so as to allow the information processing apparatus to use the control program to generate control data for controlling the peripheral processing apparatus, which control data is subsequently to be transferred to the peripheral processing apparatus through the network.

36. (Previously presented) A method according to claim 35, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by the information processing apparatus.

37. (Previously presented) A method according to claim 35, wherein the peripheral processing apparatus is a printer for forming images.

38. (Previously presented) A method according to claim 35, wherein the peripheral processing apparatus is a copy machine.

39. (Previously presented) A method according to claim 35, wherein said transfer step is executed at a timing based upon reset operation of the peripheral processing apparatus.

40. (Previously presented) A method according to claim 35, wherein said transfer step is executed at a timing based upon detection of a state in which the peripheral processing apparatus is unable to execute its processing.

41. (Previously presented) A method according to claim 35, wherein said receiving step includes receiving the control data from the information processing apparatus generated by the information processing apparatus using the transferred control program, and said method further comprising the step of executing a control processing according to the control data received in said receiving step.

42. (Previously presented) A method of controlling a peripheral processing apparatus connected to an information processing apparatus through a network, comprising the steps of:

storing a control program in a memory;

receiving a transfer request from the information processing apparatus requesting that the control program stored in said storage means be transferred to the information processing apparatus through the network;

transferring the control program stored in the memory through the network to the information processing apparatus in response to a transfer request received in said receiving step, so as to allow the information processing apparatus to use the control program to generate control data for controlling the peripheral processing apparatus, which control data is subsequently to be transferred to the peripheral processing apparatus through the network;

storing information unique to the peripheral processing apparatus; and

controlling to execute said transferring step, to transfer the stored unique information through the network to the information processing apparatus in response to receipt in said receiving step of a transfer request from the information processing apparatus requesting that the unique information be transferred to the information processing apparatus.

43. (Previously presented) A method according to claim 42, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by the information processing apparatus.

44. (Previously presented) A method according to claim 42, wherein the peripheral processing apparatus is a printer for forming images.

45. (Previously presented) A method according to claim 42, wherein the peripheral processing apparatus is a copy machine.

46. (Previously presented) A method according to claim 42, wherein said transfer step is executed at a timing based upon reset operation of the peripheral processing apparatus.

47. (Previously presented) A method according to claim 42, wherein said transfer step is executed at a timing based upon detection of a state in which the peripheral processing apparatus is unable to execute its processing.

48. (Previously presented) A method according to claim 42, wherein the unique information describes location of the peripheral processing apparatus.

49. (Previously presented) A method according to claim 42, wherein the unique information describes execution speed of the peripheral processing apparatus.

50. (Previously presented) A method according to claim 42, wherein the unique information describes running cost of the peripheral processing apparatus.

51. (Previously presented) A method according to claim 42, wherein the unique information describes power consumption of the peripheral processing apparatus.

52. (Previously presented) A method according to claim 42, wherein the unique information describes a trouble rate of the peripheral processing apparatus.

53. (Previously presented) A control method for use in a peripheral processing apparatus connected to an information processing apparatus through a network, comprising the steps of:

requesting the peripheral processing apparatus to transfer a control program for controlling the peripheral processing apparatus to the information processing apparatus through the network;

receiving the control program transferred from the peripheral processing apparatus through the network for controlling the peripheral processing apparatus in response to a request provided in said requesting step;

placing the received control program under the control of an operating system and building the received control program in the operating system; and

generating control data for controlling the peripheral processing apparatus using the control program built in the operating system and transferring the control data through the network to the peripheral processing apparatus.

54. (Previously presented) A method according to claim 53, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by the information processing apparatus.

55. (Previously presented) A method according to claim 53, wherein the peripheral processing apparatus is a printer for forming images.

56. (Previously presented) A method according to claim 53, wherein the peripheral processing apparatus is a copy machine.

57. (Previously presented) A method according to claim 53, wherein said receiving step includes receiving the control program from the peripheral processing apparatus through the network at a timing based upon reset operation of the peripheral processing apparatus.

58. (Previously presented) A method according to claim 53, wherein said receiving step includes receiving the control program from the peripheral processing apparatus through the network at a timing based upon detection of a state in which the peripheral processing apparatus is unable to execute its processing.

59. (Previously presented) A control method for use in a peripheral processing apparatus connected to an information processing apparatus through a network, comprising the steps of:

requesting the peripheral processing apparatus to transfer a control program for controlling the peripheral processing apparatus to the information processing apparatus through the network:

receiving the control program transferred from the peripheral processing apparatus through the network for controlling the peripheral processing apparatus in response to a request provided in said requesting step;

storing the received control program in a memory;

generating control data for controlling the peripheral processing apparatus using the control program stored in said storing process and transferring the control data through the network to the peripheral processing apparatus;

requesting each of the plurality of peripheral processing apparatuses to transfer information unique to the peripheral processing apparatus to the information processing apparatus through the network, in response to a request provided in said requesting step;

storing the received unique information in a memory; and

selecting one of the peripheral apparatuses based on the unique information stored in the memory,

wherein said step of generating control data includes generating control data for controlling the one peripheral processing apparatus selected in said selecting step based on the stored control program and transferring the control data through the network to the selected one peripheral apparatus.



60. (Previously presented) A method according to claim 59, wherein the control program comprises a printer driver for the peripheral processing apparatus which is interpreted and executed by the information processing apparatus.

61. (Previously presented) A method according to claim 59, wherein the peripheral processing apparatus is a printer for forming images.

62. (Previously presented) A method according to claim 59, wherein the peripheral processing apparatus is a copy machine.

63. (Previously presented) A method according to claim 59, wherein said receiving step includes receiving both the control program and the unique information from the peripheral processing apparatuses through the network at a timing based upon reset operation of the peripheral processing apparatuses.

64. (Previously presented) A method according to claim 59, wherein said receiving step includes receiving the unique information from the peripheral processing apparatuses through the network at a timing based upon detection of a state in which any of the peripheral processing apparatuses is unable to execute its processing.

65. (Previously presented) A method according to claim 59, wherein, when said receiving step receives the unique information from the peripheral processing apparatuses through the network at a timing based upon detection of a state in which any of

the peripheral processing apparatuses is unable to execute its processing, said selection process eliminates whichever of the peripheral processing apparatuses is in the inexecutable state, from possible apparatuses available to be selected.

66. (Previously presented) A method according to claim 59, wherein the unique information describes location of each of the peripheral processing apparatuses.

67. (Previously presented) A method according to claim 59, wherein the unique information describes execution speed of each of the peripheral processing apparatuses.

68. (Previously presented) A method according to claim 59, wherein the unique information describes running cost of each of the peripheral processing apparatuses.

69. (Previously presented) A method according to claim 59, wherein the unique information describes power consumption of each of the peripheral processing apparatuses.

70. (Previously presented) A method according to claim 59, wherein the unique information describes a trouble rate of each of the peripheral processing apparatuses.

71. (Previously presented) An information processing apparatus connected to a plurality of peripheral processing apparatuses through a network, comprising:

reception means for receiving, from each of the plurality of peripheral processing apparatuses, information unique to the peripheral processing apparatus through the network;

selection means for selecting one of the plurality of peripheral processing apparatuses which is to print data, on the basis of the unique information received by said reception means;

memory means for storing a plurality of device drivers for controlling respective devices; and

generation means for generating the data to be printed by the one peripheral processing apparatus selected by said selection means using one of the plurality of device drivers stored in said memory means corresponding to the selected peripheral processing apparatus.

72. (Previously presented) An information processing apparatus according to claim 71, further comprising guide means for designating priorities between the unique information of the plurality of peripheral processing apparatuses, wherein said selection means selects one of the plurality of peripheral processing apparatuses on the basis of the priorities designated by said guide means.

73. (Previously presented) An information processing apparatus according to claim 72, wherein the unique information indicates locations of the plurality of peripheral processing apparatuses.

74. (Previously presented) An information processing apparatus according to claim 72, wherein the unique information indicates execution speeds of the plurality of peripheral processing apparatuses.

75. (Previously presented) An information processing apparatus according to claim 72, wherein the unique information indicates running costs of the plurality of peripheral processing apparatuses.

76. (Previously presented) An information processing apparatus according to claim 72, wherein the unique information indicates consumption powers of the plurality of peripheral processing apparatuses.

77. (Previously presented) An information processing apparatus according to claim 72, wherein the unique information indicates trouble rates of the plurality of peripheral processing apparatuses.

78. (Previously presented) An information processing apparatus according to claim 71, wherein said reception means further receives from the plurality of peripheral processing apparatuses respective device drivers.

79. (Previously presented) An method of information processing, for processing information through a network comprising the steps of:

- receiving, from each of a plurality of peripheral processing apparatuses, information unique to the peripheral processing apparatus through the network;
- selecting one of the plurality of peripheral processing apparatuses which is to print data, on the basis of the unique information received by the receiving step;
- storing a plurality of device drivers for controlling respective devices; and
- generating the data to be printed by the one peripheral processing apparatus selected by the selection step using one of the plurality of device drivers stored in the storing step corresponding to the selected peripheral processing apparatus.

80. (Previously presented) An information processing method according to claim 79, further comprising designating priorities between the unique information of the plurality of peripheral processing apparatuses, wherein said selection step selects one of the plurality of peripheral processing apparatuses on the basis of the priorities designated by said designation.

81. (Previously presented) An information processing method according to claim 80, wherein the unique information indicates locations of the plurality of peripheral processing apparatuses.

82. (Previously presented) An information processing method according to claim 80, wherein the unique information indicates execution speeds of the plurality of peripheral processing apparatuses.

83. (Previously presented) An information processing method according to claim 80, wherein the unique information indicates running costs of the plurality of peripheral processing apparatuses.

84. (Previously presented) An information processing method according to claim 80, wherein the unique information indicates consumption powers of the plurality of peripheral processing apparatuses.

85. (Previously presented) An information processing method according to claim 80, wherein the unique information indicates trouble rates of the plurality of peripheral processing apparatuses.

86. (Previously presented) An information processing method according to claim 80, wherein said reception step further receives from the plurality of peripheral processing apparatuses respective device drivers.

87. to 137. (Canceled)

138. (Currently amended) An output control apparatus operable to communicate with an information processing apparatus via a network at least one higher-class apparatus, comprising:

print update means for updating, ~~for each print process~~, a print count value indicating a number of prints in response to delivery of a print sheet printed;

trouble update means for updating, ~~for each print trouble~~, a trouble count value indicating a number of print troubles when a print trouble occurs; and

transmission means for, if the print count value updated by said print update means reaches a predetermined value, transmitting trouble data including the trouble count value updated until the print count value reaches the predetermined value to the information processing a predetermine one of the at least one higher-class apparatus such that the information processing apparatus recognizes the trouble count value indicating the number of troubles updated until the print count value reaches the predetermined value at said output control apparatus.

139. (Previously presented) An output control apparatus according to claim 138, further comprising means for initializing the print count value and the trouble count value if the print count value reaches the predetermined value.

140. (Previously presented) An output control apparatus according to Claim 138, wherein said transmission means transmits the trouble data and information unique to said output control apparatus at the same time.

141. (Previously presented) An output control apparatus according to Claim 138, wherein said output control apparatus is a digital copier.

142. (Currently amended) A method by which an output control apparatus is made operable to communicate with an information processing apparatus via a network at least one higher-class apparatus, comprising the steps of:

a print update step, of updating, ~~for each print process~~, a print count value indicating a number of prints in response to delivery of a print sheet printed;

a trouble update step, of updating, ~~for each print trouble~~, a trouble count value indicating a number of print troubles when a print trouble occurs; and

if the print count value updated in said print update step reaches a predetermined value, transmitting trouble data including the trouble count value updated until the print count value reaches the predetermined value to the information processing a predetermine one of the at least one higher-class apparatus such that the information processing apparatus recognizes the trouble count value indicating the number of troubles updated until the print count value reaches the predetermined value at said output control apparatus.

143. (Previously presented) A method according to claim 142, further comprising the step of initializing the print count value and the trouble count value if the print count value reaches the predetermined value.



144. (Previously presented) A method according to Claim 142, wherein said transmitting step includes transmitting the trouble data and information unique to the output control apparatus at the same time.

145. (Previously presented) A method according to Claim 142, wherein the output control apparatus is a digital copier.

146. (Currently amended) A memory medium, storing computer-executable code for causing execution of a method by which an output control apparatus is made operable to communicate with an information processing apparatus via a network ~~at least one higher-class apparatus~~, said method comprising the steps of:

a print update step, of updating, ~~for each print process~~, a print count value indicating a number of prints in response to delivery of a print sheet printed;

a trouble update step, of updating, ~~for each print trouble~~, a trouble count value indicating a number of print troubles when a print trouble occurs; and

if the print count value updated in said print update step reaches a predetermined value, transmitting trouble data including the trouble count value updated until the print count value reaches the predetermined value to the information processing a ~~predetermine one of the at least one higher-class apparatus~~ such that the information processing apparatus recognizes the trouble count value indicating the number of troubles updated until the print count value reaches the predetermined value at said output control apparatus.

147. (Previously presented) A memory medium according to claim 146, wherein said method further comprises the step of initializing the print count value and the trouble count value if the print count value reaches the predetermined value.

148. (Previously presented) A memory medium according to Claim 146, wherein said transmitting step includes transmitting the trouble data and information unique to the output control apparatus at the same time.

149. (Previously presented) A memory medium according to Claim 146, wherein the output control apparatus is a digital copier.

150. (Currently amended) An output control system comprising at least one information processing apparatus and a plurality of output control apparatuses each operable to communicate with said at least one information processing apparatus,

wherein each of said plurality of output control apparatuses comprises:

print update means for updating, ~~for each print process,~~ a print count value indicating a number of prints in response to delivery of a print sheet printed;

trouble update means for updating, ~~for each print trouble,~~ a trouble count value indicating a number of print troubles when a print trouble occurs; and

transmission means for, if the print count value updated by said print update means reaches a predetermined value, transmitting trouble data including the trouble count value updated until the print count value reaches the predetermined value to a predetermined one of said at least one information processing apparatus such that the

predetermined one of said at least one information processing apparatus recognizes the trouble count value indicating the number of troubles updated until the print count value reaches the predetermined value at said output control apparatus, and

wherein each of said at least one information processing apparatus comprises:

reception means for receiving the trouble data from said

transmission means, and

display control means for making a comparison between the trouble data of said plurality of output control apparatuses received by said reception means, and for controlling a display device to display a result of the comparison.

151. (Previously presented) A system according to Claim 150, wherein each of said at least one information processing apparatus further comprises selection means for selecting one of said plurality of output control apparatuses to be used in response to the comparison made by said display control means.

152. (Currently amended) An output control method, for use in a system comprising at least one information processing apparatus and a plurality of output control apparatuses each operable to communicate with said at least one information processing apparatus, comprising the steps of:

at at least one of said plurality of output control apparatuses:

a print update step, ~~of updating, for each print process,~~ a print count value indicating a number of prints in response to delivery of a print sheet printed;

a trouble update step, ~~of updating, for each print trouble,~~ a trouble count value indicating a number of print troubles when a print trouble occurs; and

a transmission step, in which, if the print count value updated in said print update step reaches a predetermined value, trouble data is transmitted, including the trouble count value updated until the print count value reaches the predetermined value to a predetermined one of said at least one information processing apparatus such that the predetermined one of said at least one information processing apparatus recognizes the trouble count value indicating the number of troubles updated until the print count value reaches the predetermined value at said output control apparatus, and

at said at least one information processing apparatus:

a reception step, of receiving the trouble data transmitted in said transmission step, and

a display control step, of making a comparison between the trouble data of the plurality of output control apparatuses received in said reception step, and controlling a display device to display a result of the comparison.

153. (Previously presented) A method according to Claim 152, further comprising the step of, at said information processing apparatus, selecting one of the plurality of output control apparatuses to be used in response to the comparison made in said display control step.